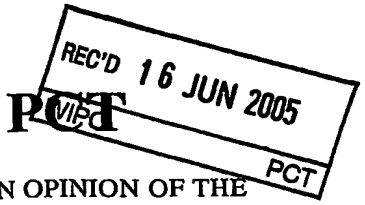
PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY



To:
DOLORES T. KENNEY
OLSON & HIERL, LTD.
20 NORTH WACKER DRIVE
36TH FLOOR
CHICAGO, IL 60606

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing (*day/month/year*)	14 JUN 2005
Applicant's or agent's file reference AV-6.1 PCT	FOR FURTHER ACTION See paragraph 2 below

International application No.	International filing date (*day/month/year*)	Priority date (*day/month/year*)
PCT/US05/03462	28 January 2005 (28.01.2005)	29 January 2004 (29.01.2004)

International Patent Classification (IPC) or both national classification and IPC

IPC(7): A61K 7/135 and US Cl.: 424/62, 70.1, 70.2, 70.6, 401; 8/405, 406, 407

Applicant

AVLON INDUSTRIES, INC.

1. This opinion contains indications relating to the following items:

☒	Box No. I	Basis of the opinion
☐	Box No. II	Priority
☐	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
☐	Box No. IV	Lack of unity of invention
☒	Box No. V	Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
☐	Box No. VI	Certain documents cited
☐	Box No. VII	Certain defects in the international application
☐	Box No. VIII	Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1*bis*(*b*) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/ US
Mail Stop PCT, Attn: ISA/US
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
Facsimile No. (703) 305-3230

Authorized officer
Yogendra N. Gupta
Telephone No. 571-272-1700

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US05/03462

Box No. I Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This opinion has been established on the basis of a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).

2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

☐ a sequence listing

☐ table(s) related to the sequence listing

b. format of material

☐ in written format

☐ in computer readable form

c. time of filing/furnishing

☐ contained in international application as filed.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority for the purposes of search.

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

WRITTEN OPINION OF THE
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International application No.
PCT/US05/03462

Box No. V Reasoned statement under Rule 43 *bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims NONE	YES
	Claims 1-34	NO
Inventive step (IS)	Claims NONE	YES
	Claims 1-34	NO
Industrial applicability (IA)	Claims 1-34	YES
	Claims NONE	NO

2. Citations and explanations:

Please See Continuation Sheet

Supplemental Box
In case the space in any of the preceding boxes is not sufficient.

V. 2. Citations and Explanations:

Claims 1-34 lack an inventive step under PCT Article 33(3) as being obvious over Narasimhan, et al. (US 6,238,653).

Narasimhan, et al. teach an aqueous peroxide composition for coloring or lightening hair comprising (a) 1-99% of an aqueous phase containing (ii) 1-55% by weight of the total composition of water, (ii) 1-45% hydrogen peroxide, and (iii) a water soluble cosolvent; and (b) 0.1-60% of an oil phase; and (c) 1-65% of an organic, amphiphilic, surface active ingredient capable of interacting with the water phase and the oil phase to form lyotropic liquid crystals containing said water phase ingredients; a method for coloring or lightening hair using the peroxide composition, and a method for reducing the amount of time necessary to permanently color hair using the peroxide composition. See abstract. Specifically, Narasimhan, et al. teach an aqueous peroxide composition for coloring or lightening hair comprising: (a) 1-99% of an aqueous phase containing: (ii) 1-55% water, (ii) 1-45% hydrogen peroxide, and (iii) a water soluble cosolvent; (b) 0.1-60% of an oil phase; and (c) 1-65% of an organic, amphiphilic, surface active ingredient capable of interacting with the water phase and the oil phase to form lyotropic liquid crystals containing said water phase ingredients.

The invention also comprises a method for coloring or lightening hair comprising the steps of:

(a) combining, immediately prior to use, (1) an aqueous alkaline composition comprising at least one interactive surfactant; and (2) a peroxide composition for coloring or lightening hair comprising: (i) 1-99% of an aqueous phase containing:

(aa) 1-55% water, (bb) 1-45% hydrogen peroxide, and (cc) a water soluble cosolvent; (ii) 0.1-60% of an oil phase; and (iii) 1-65% of an organic, amphiphilic, surface active ingredient capable of interacting with the water phase and the oil phase to form lyotropic liquid crystals containing said water phase ingredients. (b) applying said mixture of (1) and (2) to the hair to cause coloring or lightening of the hair.

Narasimhan, et al. teach a method for reducing the amount of time required to lighten or permanently color hair (when compared to conventional products), comprising treating the hair with a mixture of a liquid crystalline peroxide composition and an aqueous alkaline composition containing an interactive surfactant. See col.2,ln.25-65 and columns 3-4.

Specifically regarding the emulsion, Narasimhan, et al. teach The liquid crystalline state exists in, preferably, 20-99.99% by weight of the total peroxide composition. In addition, the peroxide composition is preferably a one phase composition, as opposed to a two phase emulsion composition having dispersed droplets in a continuous phase. See col.3,ln.18-22.

Specifically regarding the surfactant, Narasimhan, et al. teach the utilization of various organic, amphiphilic, surface active agents include nonionic, amphoteric, cationic, and anionic surface active agents. See col.6,ln.19-24.

Specifically regarding the sorbitan derivatives Narasimhan, et al. teach suitable sorbitan derivatives include PEG derivatives of sorbitan wherein the number of repeating ethylene oxide units ranges from 2 to 200, such as PEG sorbitan beeswax, glyceryl/sorbitol/oleate/hydroxystearate, PEG sorbitan cocoate, PEG sorbitan diisostearate, PEG sorbitan isostearate, PEG sorbitan lanolate, PEG sorbitan laurate, PEG sorbitan oleate, PEG sorbitan palmitate, PEG sorbitan perisostearate, PEG sorbitan peroleate, PEG sorbitan stearate, PEG sorbitan tetraoleate, PEG sorbitan tetrastearate, PEg sorbitan triisostearate; Polysorbates such as Polysorbate 20-85, Polysorbtate 80 acetate; and sorbitan esters such as sorbitan caprylate, cocoate, diisostearate, dioleate, distearate, isostearate, laurate, oleate, olivate, palmitate, sesquiisostearate, sesquioleate, sesquistearate, stearate, triisostearate, trioleate and the like. See col.6,ln.45-65.

Narasimhan, et al. do not specifically teach lightening hair with a PEG-40 sobitan peroleate as recited by the instant claims.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teaching of

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
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Supplemental Box
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Narasimhan, et al. with a PEG-40 sobitan peroleate, as recited by the instant claims, because Narasimhan, et al. suggest a hair lightening composition comprising sorbitan derivatives wherein the number of repeating ethylene oxide units ranges from 2 to 200 in general and further suggest sorbitan caprylate, cocoate, glyceryl/sorbitol/oleate/hydroxystearate, PEG sorbitan peroleate in an analogous compostion for lightening hair process in general..

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	Claims 1-34	NO
Inventive step (IS)	Claims NONE	YES
	Claims 1-34	NO
Industrial applicability (IA)	Claims 1-34	YES
	Claims NONE	NO

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Please See Continuation Sheet

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